

BUKKA, Jan; HLAVATY, Antoni; PATYNSKI, Jerzy; SZCZĘKOT, Józef

Results of the examination of senile hips of inmates of a home  
for the aged in Wejherowo. Chir.narz.ruchu ortop.polska 24 no.6:  
553-559 '59.

1. Z Kliniki Ortopedycznej AM w Gdansk. Kierownik: doc.dr.  
A. Senger.

(HIP pathol.)

HLAVATY, Antoni; PATYNSKI, Jerzy; SZCZĘKOT, Józef; BURKA, Jan

Analysis of clinical and radiological pictures of deforming  
changes of the hip joint. Chir.narw.ruchu ortop.polska 24 no.  
6:561-568 '59.

1. Z Kliniki Ortopedycznej AM w Gdansk. Kierownik: doc.dr  
A. Senger.  
(HIP pathol.)

FACZYNSKI, Andrzej; SZCZEKOT, Jozef; DUNAJ, Weronika; WOJCIK, Tadeusz

Excessive physiological mobility of the cervical spine in children as a cause of diagnostic difficulties. Chir. narzad. ruchu ortop. Pol. 28 no.7:787-791 '63

1. Z Kliniki Ortopedycznej Akademii Medycznej w Gdansk  
(Kierownik: doc. dr. A. Senger).

SZCZEKOWSKI, J.

POL.

621.315.2.091 : 621.393.73 : 536.49

3355

Szczekowski J. The Effect of Temperature on the Attenuation of Cable Circuits in Poland.

"Zagadnienie wpływu temperatury na tłumienność torów kablowych w warunkach polskich". (Prace Przem. Inst. Telekom. No. 11), Warszawa, 1951, PWT, 10 pp., 10 figs., 5 tabs.

The paper deals with the problem of the influence of temperature on the attenuation of star quad cable circuits of 1.2 mm conductor diameter. The first part discusses the interdependence between temperature variations on the earth surface and those of the underground cable, and leads to determination of the anticipated limits to the variations of attenuation constant of the cable circuits under consideration. The subsequent determination of maximum variations of attenuation of national cable circuits is based on the value of temperature coefficient of attenuation computed in P.I.T., with reference to the corresponding data from foreign authors. A closer analysis of the problem leads to the conclusion that under given circumstances the A.V.C. does not appear to be necessary, while manual regulation of definite time intervals turns out to be quite sufficient. The derivation of the fundamental formulae for amplitude and delay of temperature variations of underground cable, and the derivative of the attenuation constant as regards temperature are given in the appendices.

SZCZEKOWSKI, Janusz, mgr inż.

Problems of new teletransmission systems. Przegl telekom 34 no.8:233-  
236 Ag '61.

SZCZENIOWSKI, Boleslaw (Montreal, Canada)

Thermodynamic processes of mixing two different gases. Archiw  
bud masz 10 no. 3: 225-237 '63.

15

3

PROCESSES AND PREPARATION

The influence of a cloud of electrons on the structure of de Broglie waves. S. SIECIENKOWSKI AND L. INFELD *Bull intern acad polonaise* 1931A, 482 (in English). With the aid of Schrödinger's equation the influence of the vol. charge upon the structure of a plane de Broglie wave is discussed.

ANALYSIS METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
<p>1861. Influence of a Cloud of Electrons on the Structure of de Broglie Waves. S. Szeniowski and L. Infeld. <i>Acad. Polonaise Sci. et Lettres, Bull. No. 6A. pp. 482-488, June, 1931. In English.</i>—The solution of Schrödinger's wave equation is found for an electron when in the presence of a cloud of electrons which produce a (negative) volume-charge of electricity. The theory is applied to explain the width of the diffracted electron beam in the Davisson and Germer type of diffraction experiment. The calculated widths, however, are much smaller than those observed.</p> <p style="text-align: right;">G. C. McV.</p>																			
<p>ASB-514 METALLURGICAL LITERATURE CLASSIFICATION</p>																			



SA

A 53  
2

3148. Influence of Space Charge on the Structure of de Broglie Waves. S. E. Naceniowski and L. Infeld. *Acta Physica Polonica*, 1, 1-2, pp. 37-46, 1933. *In English*.—The author considers the electron beam, in an electron diffraction experiment, as it passes through the field-free space between the slit and the surface of the diffracting crystal. At the two ends of the path the electric potential has a common value, but owing to space charge it is not constant along the path. The law of variation of the potential is evaluated, and this is then inserted into Schrödinger's equation and it is found that the eigenenergies are slightly lowered, i.e., the de Broglie wave-length of the electrons is increased slightly. On the other hand the refractive index of crystals for de Broglie waves exceeds unity and the electron wave-length is decreased inside the crystal. This latter effect is in the opposite direction to, and is usually large compared with, the space-charge effect. Some experiments of Davison and Germer indicate, however, that the space-charge effect may come into play. The space charge besides increasing the wave-length also results in a widening of the diffraction line of the same order of magnitude as the wave length shift.

W. S. S.

ASB-514 METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

3356. Penetration of Electrons into the Region of Negative Energy Values. S. Szaecniowski. *Acad. Polonaise Sci. et Lettres, Bull.* 1-3A. pp. 21-39. Jan. March, 1933. In German.—The Brillouin-Weitzel method for the approximate calculation of wave functions in the one dimensional case is applied to the Dirac wave equation for electrons moving in a potential field  $P(x)$  of the form:

$P(x) = \text{constant} = P_1$  for  $x < x_1$ .

$P(x) = \text{constant} = P_2$  for  $x > x_2$  ( $P_2 > P_1$ ).

$P(x)$  = any monotonic increasing function of  $x$  rising from  $P_1$  to  $P_2$  for  $x_1 < x < x_2$ .

The author considers electrons moving in the direction of increasing  $x$  and having total energy  $W$  such that:  $\frac{W - P_1}{mc^2} > 1$  and  $\frac{W - P_2}{mc^2} < -1$ .

Thus these electrons have positive energy in excess of the rest mass energy for  $x < x_1$ , and negative total energy for  $x > x_2$ . The probability that such electrons will penetrate into the region  $x > x_2$  is computed and it is shown that this probability can have appreciable values only if the average rate of increase of  $P(x) \sim P_2 - P_1/(x_2 - x_1)$  is sufficiently great, i.e., of the order of  $2mc^2/(h/mc) \approx 2m^2c^3/h$ . This confirms a general prediction due to Bohr.

W. S. S.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200

201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300

301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400

401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500

501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600

601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700

701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800

801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900

901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 1045 1046 1047 1048 1049 1050 1051 1052 1053 1054 1055 1056 1057 1058 1059 1060 1061 1062 1063 1064 1065 1066 1067 1068 1069 1070 1071 1072 1073 1074 1075 1076 1077 1078 1079 1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1090 1091 1092 1093 1094 1095 1096 1097 1098 1099 1100

1101 1102 1103 1104 1105 1106 1107 1108 1109 1110 1111 1112 1113 1114 1115 1116 1117 1118 1119 1120 1121 1122 1123 1124 1125 1126 1127 1128 1129 1130 1131 1132 1133 1134 1135 1136 1137 1138 1139 1140 1141 1142 1143 1144 1145 1146 1147 1148 1149 1150 1151 1152 1153 1154 1155 1156 1157 1158 1159 1160 1161 1162 1163 1164 1165 1166 1167 1168 1169 1170 1171 1172 1173 1174 1175 1176 1177 1178 1179 1180 1181 1182 1183 1184 1185 1186 1187 1188 1189 1190 1191 1192 1193 1194 1195 1196 1197 1198 1199 1200

1201 1202 1203 1204 1205 1206 1207 1208 1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300

1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400

1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500

1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600

1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700

1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800

1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900

1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100

2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200

2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300

2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400

2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500

2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600

2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 26

Specific ionization characteristic of cosmic rays. S. Szczepkowski, St. Zimecki and K. Narkiewicz-Jodko. *Bull. intern. acad. polon. sci., Classe sci. math. nat.* 1938A, 273-80 (in English); cf. C. A. 32, 7339. Expts. were carried out to investigate whether the law that ionization by cosmic rays is proportional to the density of the gases through which they pass is valid in the upper layers of the troposphere. The pressure chambers used were steel bombs of about 900 cc. capacity, each connected to a Lindemann electrometer. Observations were made in a balloon near Warsaw on a windless day at heights between 6000 and 10,000 m., the pressures varying from 180 to 207 mm. Hg. The measurements were made with a N. ionization chamber and then with a Kr chamber. The simple law of proportionality between ionization by cosmic rays and gas density was found at the heights where the measurements were made; the soft component strongly prevails. The data obtained show that, contrary to the results of Jullis and Masch (C. A. 31, 26219), the mechanism of the ionization is the same for particles of the hard and soft components of the cosmic rays. The ionization curve obtained by the authors is much steeper than that of Kolbier. No discontinuities were found in their observations, and thus they conclude that in the atmosphere there exist no radioactive bodies of terrestrial or extra-terrestrial origin. Louis Waldman

1ST AND 2ND ORDERS															3RD AND 4TH ORDERS														
PROCESSES AND PROPERTIES INDEX																													
<div style="font-size: 2em; font-weight: bold; margin-bottom: 10px;">SA</div> <div style="float: right; text-align: right;"> <div style="font-size: 2em; font-weight: bold;">A 53</div> <div style="font-size: 2em; font-weight: bold;">t</div> </div> <div style="clear: both;"></div> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>235. Ionisation by Cosmic Rays. S. Saczko, S. Ziemicki and K. Narkiewicz-Jodko. <i>Acad. Polonaise Sci. et Lettres, Bull.</i> 6-7A, pp. 273-289, June-July, 1938. In English.—Experiments were carried out to investigate whether the law that ionisation by cosmic rays is proportional to the density of the gases through which they pass is valid in the upper layers of the troposphere. The pressure chambers used were steel spheres of about 900 cm<sup>3</sup> capacity. They were connected with Lindemann electrometers. Observations were made in a balloon near Warsaw on a windless day at heights between 6000 and 10,000 m., the pressures varying from 280 to 297 mm.Hg. The measurements were made with a N<sub>2</sub> ionisation chamber and then with a Kr chamber. The simple law of proportionality between ionisation by cosmic rays and gas density was found. At the heights where the measurements were made the soft-component of cosmic rays strongly prevails. The data obtained show that, contrary to the results of Jullis and Masuch, the mechanism of the ionisation is the same for particles of the hard and soft components of the cosmic rays. Ionisation by γ-rays is subject to laws markedly different from those for cosmic rays. The ionisation curve obtained by the authors is much steeper than that of Kolhörster. No discontinuities were found in their observations and thus they conclude that in the atmosphere there exist no radioactive bodies of terrestrial or extra-terrestrial origin.</p> <p style="text-align: right;">J. J. S.</p> </div>															<div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <div style="display: flex; justify-content: space-between;"> <span>ASAC-54A METALLURGICAL LITERATURE CLASSIFICATION</span> <span>6-2</span> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <span>SECTION SYMBOLS</span> <span>SECTION SYMBOLS</span> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <span>SYMBOLS</span> <span>SYMBOLS WITH ONLY USE</span> <span>SYMBOLS</span> </div> </div>														

LIST AND ORDER										PROCESSES AND PROPERTIES INDEX										MAP AND CRYSTAL									
<p>✓</p> <p>Włodzisław Dulewski, J. Patkowski and S. Szae- townski: <i>Acta Phys. Polon.</i> 7, 97-100 (1938).—Obituary note (in English and in Polish). E. Jónafóttir</p>										<p>2</p>										<p>COMMON VARIETIES INDEX</p>									
<p>COMMON ELEMENTS</p>										<p>COMMON VARIETIES INDEX</p>										<p>COMMON VARIETIES INDEX</p>									
<p>OPEN</p>										<p>COMMON VARIETIES INDEX</p>										<p>COMMON VARIETIES INDEX</p>									
<p>MATERIALS INDEX</p>										<p>COMMON VARIETIES INDEX</p>										<p>COMMON VARIETIES INDEX</p>									
<p>ASB-51A METALLURGICAL LITERATURE CLASSIFICATION</p>										<p>COMMON VARIETIES INDEX</p>										<p>COMMON VARIETIES INDEX</p>									
<p>SECTION 1</p>										<p>SECTION 2</p>										<p>SECTION 3</p>									
<p>SECTION 4</p>										<p>SECTION 5</p>										<p>SECTION 6</p>									
<p>SECTION 7</p>										<p>SECTION 8</p>										<p>SECTION 9</p>									
<p>SECTION 10</p>										<p>SECTION 11</p>										<p>SECTION 12</p>									
<p>SECTION 13</p>										<p>SECTION 14</p>										<p>SECTION 15</p>									
<p>SECTION 16</p>										<p>SECTION 17</p>										<p>SECTION 18</p>									
<p>SECTION 19</p>										<p>SECTION 20</p>										<p>SECTION 21</p>									
<p>SECTION 22</p>										<p>SECTION 23</p>										<p>SECTION 24</p>									
<p>SECTION 25</p>										<p>SECTION 26</p>										<p>SECTION 27</p>									
<p>SECTION 28</p>										<p>SECTION 29</p>										<p>SECTION 30</p>									
<p>SECTION 31</p>										<p>SECTION 32</p>										<p>SECTION 33</p>									
<p>SECTION 34</p>										<p>SECTION 35</p>										<p>SECTION 36</p>									
<p>SECTION 37</p>										<p>SECTION 38</p>										<p>SECTION 39</p>									
<p>SECTION 40</p>										<p>SECTION 41</p>										<p>SECTION 42</p>									
<p>SECTION 43</p>										<p>SECTION 44</p>										<p>SECTION 45</p>									
<p>SECTION 46</p>										<p>SECTION 47</p>										<p>SECTION 48</p>									
<p>SECTION 49</p>										<p>SECTION 50</p>										<p>SECTION 51</p>									
<p>SECTION 52</p>										<p>SECTION 53</p>										<p>SECTION 54</p>									
<p>SECTION 55</p>										<p>SECTION 56</p>										<p>SECTION 57</p>									
<p>SECTION 58</p>										<p>SECTION 59</p>										<p>SECTION 60</p>									
<p>SECTION 61</p>										<p>SECTION 62</p>										<p>SECTION 63</p>									
<p>SECTION 64</p>										<p>SECTION 65</p>										<p>SECTION 66</p>									
<p>SECTION 67</p>										<p>SECTION 68</p>										<p>SECTION 69</p>									
<p>SECTION 70</p>										<p>SECTION 71</p>										<p>SECTION 72</p>									
<p>SECTION 73</p>										<p>SECTION 74</p>										<p>SECTION 75</p>									
<p>SECTION 76</p>										<p>SECTION 77</p>										<p>SECTION 78</p>									
<p>SECTION 79</p>										<p>SECTION 80</p>										<p>SECTION 81</p>									
<p>SECTION 82</p>										<p>SECTION 83</p>										<p>SECTION 84</p>									
<p>SECTION 85</p>										<p>SECTION 86</p>										<p>SECTION 87</p>									
<p>SECTION 88</p>										<p>SECTION 89</p>										<p>SECTION 90</p>									
<p>SECTION 91</p>										<p>SECTION 92</p>										<p>SECTION 93</p>									
<p>SECTION 94</p>										<p>SECTION 95</p>										<p>SECTION 96</p>									
<p>SECTION 97</p>										<p>SECTION 98</p>										<p>SECTION 99</p>									
<p>SECTION 100</p>										<p>SECTION 101</p>										<p>SECTION 102</p>									

100 AND 1000 ORDERS										100 AND 1000 ORDERS									
PER-CLASS AND PER-PROPERTY INDEX																			
<p>SA</p> <p>4082. Residual Currents and Deep Water Measurements of Cosmic Rays. S. Szczepiowski and S. Ziemecki. <i>Acta Physica Polonica</i>, 7. 1. pp. 59-67, 1938. In English.—Residual currents in two ionisation chambers, one filled with A, the other with air, at pressures up to 30 atm., have been measured in a rock-salt mine at a depth of 406 m. The residual current diminished with diminishing pressure. Very marked fluctuations, sometimes several times the mean value, were observed. It is considered that this and some of the other observed details can perhaps be explained by the hypothesis of an emission of positive particles, of an unspecified nature, from the walls of the chamber. It is considered that these findings have a bearing on the contradictory and anomalous results found by other investigators under great depths of water. D. H. F.</p>																			
ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
CLASSIFICATION										CLASSIFICATION									

SZCZENIOWSKI, SZCZEPAN

Fizyka doswiadczalna. [Wyd. 1.] Warszawa, Panstwowe Wydawn. Naukowe.  
[Experimental physics. 1st ed. illus., col. plates, diagrs., graphs,  
index]  
Vol. 4. [Optics] 1954. 372 p.

SOURCE: East European Accessions List (EEAL), Library of Congress,  
Vol. 4, No. 12, December 1955.



SEZENICHSKI, S.

"Antiferromagnetics."

Postepy Fizyki, Vol 5, No 2, 1954, p. 153

SO: Eastern European Accessions List, Vol 3, No 10, Oct 1954, Lib. of Congress

SZCZENIOWSKI, S.

SZCZENIOWSKI, S.

Influence of the ideas of Copernicus on the development of physics, p. 239.  
(POSTĘPY FIZYKI, Warszawa, Vol. 5, no. 3, 1954.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

SZCZENIOWSKI, Sz.

Fizyka doswiadczalna, Panstwowe Wydawnictwo Naukowe, cz.III, Elektrycznosc i magnetyzm, 1955 s. 559

Explaining Physics - Part III, Electricity & Magnetism  
SO: Technologia Ropy, 1955, Wroclaw, Unclassified.

55M/6  
735.64  
.T6

POLAND/Nuclear Physics - Installations and Instruments.  
Methods of Measurements and Research

C

Abs Jour : Ref Zhur - Fizika, No 8, 1959, 17225

Author : Szczeniowski, Szczepan

Inst : 2

Title : New Facts Concerning Elementary Particles and Their  
Significance to the Problem of Structure of Space-Time

Orig Pub : Studia filoz., 1958, No 5, 52-80, 195-196, 204-206

Abstract : Survey article.

Card 1/1

- 23 -

PHASE I BOOK EXPLOITATION

FOL/3819

Szczeniowski, Szczepan

Fizyka doświadczalna, Część 5, 1: Fizyka atomowa (Experimental Physics, Part 5, Vol. 1, Atomic Physics) Warsaw, Państwowe wyd-wo naukowe, 1959. 385 p. 5,200 copies printed. Errata slip inserted.

No contributors mentioned.

**PURPOSE:** The book is an introduction to atomic physics for general readers with a scientific background. It may be used as textbook in schools of higher education.

**COVERAGE:** The book on atomic physics is Part V, Volume 1 of the series published under the general title "Fizyka Doświadczalna". The book consists of seven sections which treat, successively, the system of natural elements, the properties of x-rays, photons in radiation, atomic spectra, the structure of the atom according to Bohr, the spectra of multielectron atoms, electron spin, the Pauli exclusion principle, x-ray levels, wave properties of matter and the waveline interpretation of the atom, and the physical properties of molecules. There are 17 tables and 248 figures. No personalities are mentioned.

Card 1/6

SZCZENIOWSKI, Szczepan, prof.dr.

Impressions from a stay in Japan in connection with the international conference on magnetism and crystallography. Problemy 18 no.8:556-568 '62.

1. Kierownik Katedry Fizyki Teoretycznej, Uniwersytet A.Mickiewicza, Poznan, Kierownik Katedry Fizyki Ogolnej B, Politechnika, Warszawa, Zaklad Ferromagnetykow, Instytut Fizyki, Polska Akademia Nauk, Warszawa.

SZCZENIOWSKI, Szczepan

General characteristics of studies on magnetic properties of thin ferromagnetic films. Zesz probl nauki Pol 25:23-28 '63.

1. Department of Ferromagnetics, Institute of Physics, Polish Academy of Sciences, Poznan.

MISIEWICZ, Janina i współpracownicy: BATYCKI, W.; BURACZEWSKI, O.; GACKOWSKI, J.;  
GURTAT, B.; KOBIERSKA, H.; KOZAKOW, H.; KRZYSZKOWSKA, A.; KURYLOWICZ, W.;  
KUZNIECOW, A.; MULLER, H.; RAFINSKI, T.; ROMANOWSKA, I.; SITEK, K.;  
STOPNICKA, M.; SZCZEPANAKI, W.; SZUSTROWA, J.; WIERZBOWSKA, M.;  
WIKTOROWICZ, J.

Early results of vaccination against tuberculosis with vaccines prepared  
from four different BCG strains. I. Gruzlica 25 no.3:243-250 Mar 57.

1. Z Instytutu Gruzlicy w Warszawie Dyrektor: prof. dr J. Misiewicz.  
Adres: Warszawa, ul Plocka 26.

(BCG VACCINATION, statist.  
comparison of 4 strains (Pol))



SZCZEPANEK, K.

Address book of the palynologists of the Soviet Union. Wiadom  
botan 6 no.2:188-189 '62.

WIECKOWSKI, S.; SZCZEPANEK, K.

Assimilatory pigments from subfossil fir needles (*Abies alba* Mill.),  
Acta soc. botan Pol 32 no.1:101-111 '63.

1. Laboratory of Plant Physiology, Jagellonian University, Krakow.  
and Laboratory of Paleobotany, Jagellonian University, Krakow.

SZCZEPANEK, Kazimierz

Interglacial flora at Nidzica, Olsztyn Voivodeship.  
Przegl geol 10 no.11:609-611 N '62.

1. Katedra Systematyki i Geografii Roslin, Uniwersytet  
Jagiellonski, Krakow.

SZCZEPANEK, Kazimierz

The history of the late glacial and holocene vegetation of the  
Gory Swietokrzyskie Mountains. Acta palaeobot 2 no.2:3-44  
'61.

SZCZEPANEK, Kazimierz

Late Pleistocene flora from Ustron on the upper Vistula River.  
Kwartalnik geol 9 no.1:173-182 '65.

1. Department of Plant Taxonomy and Geography of Jagiellonian  
University, Laboratory of Palaeobotany, Krakow. Submitted  
February 9, 1964.

SZCZEPANIAK, C.; DOMOSLAWSKI, S.

Diagrams for the selection of the most favorable resistance in the Swinburne arrangement for temperature error compensation in movable coil millivoltmeters. p. 45.

POMIARY, AUTOMATYKA, KONTROLA. (Naczelna Organizacja Techniczna Warszawa, Poland. Vol. 5, no. 2, 1959.

Monthly list of East European Accessions (EEAI) LC, vol. 8, no. 8, Aug. 1959.

Uncl.

SZCZEPANIAK, Czesław, mgr., inż.

A universal pulse simulator for automatically controlled industrial unit. Pomiary 7 no.9:365-370 S '61.

1. Zakład Automatyki i Miernictwa Elektrycznego, Instytut Elektro-techniki.

(Automatic control)

WERNER, Jerzy, prof.; SZCZEPANIAK, Cezary, mgr inż.

Hydrostatic transmission in the automobile driving system.  
Techn motor 13 no. 5/6: 154-158 My-Je '63.

1. Katedra Budowy Samochodow, Politechnika, Lodz.



SZCZEPANIAK, Cezary, mgr inż.

Axial forces in the hydraulic momentum converter. Techn motor 14  
no. 6:165-168 Je '64.

1. Department of Automobile Design, Technical University, Lodz.

SZCZEPANIAK, E.

"Comparison of methods of computing frame fibrations." p. 372 (INZYNIERIA I BUDOWA  
NICTWO, Vol. 9, no. 11, Nov. 1952, Warszawa, Poland)

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress

August 1953, Uncl.

SZCZEPAŃSKI, EDMUND

0000

Wskazanie Obciążenia (Dynamic Equations of Deformation of the Middle Surface of a Plate Subjected to an Arbitrary Load) Edmund Szczępański 1964

SZCZEPANIAK, E.

R: Pietkowski's Fundamentowanie (Foundations); a book review. p. 28.

(INZYNIERIA I BUDOWNICTWO. Vol.14. No. 1, Jan. 1957, Warszawa, Poland.)

SO: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No. 10, October. 1957. Uncl.

1

MOSZYNSKA, B.; SZCZEPANIAK, K.

Influence of temperature on the width of some tetrachloride Raman lines and the calculation of the time periods of the relaxation of orientation. Bul Ac Pol mat 8 no.3:195-201 '60. (EEAI 9:11)

1. Instytut Fizyki Doswiadczalnej, Uniwersytet, Warszawa i Katedra Fizyki, A, Politechnika, Warszawa. Presente par A.Jablonski.

(Carbon tetrachloride)

(Spectrum analysis)

(Raman effect)

(Titanium chlorides)

(Tin chlorides)

SZCZEPANIAK, K.

IR spectrum and intermolecular interactions in  $\text{CDCl}_3$ -proton acceptors system. Bul Ac Pol mat 12 no.3:189-196 '64

1. Department of Physics A., Technical University, Warsaw.  
Presented by A. Jablonski.

SZCZEPANIAK, K.; TRAMER, A.

Charge-transfer theory of hydrogen bond and infrared spectra of chloroform complexes. Bul Ac Pol math 13 no.1:79-83 '65.

1. Department of Physics "A" of Warsaw Technical University and Institute of Physics of the Polish Academy of Sciences. Submitted October 30, 1964.

*Szczepaniak, Stanislaw*  
KRZECZKOWSKA, Irena; ISKIERKO, Jerzy; SZCZEPANIAK, Stanislaw

Studies on amino nitrogen and potassium ions contents in filtrates of Moreau's Brazilian BCG strains cultured on Sauton's synthetic medium. Med. dosw. mikrob. 9 no.4:359-367 1957.

1. Z Zakladu Chemii Ogolnej Wydzialu Lekarskiego A. M. v Lublinie.  
Kierownik: I. Krzeczowska.

(MYCOBACTERIUM TUBERCULOSIS BOVIC, culture,  
BCG Moreau's strain, amino nitrogen & potassium in  
filtrates of cultures in Sauton's medium (Pol))

(NITROGEN, determination,  
in BCG, Moreau's strain, cultivated in Sauton's  
medium (Pol))

(POTASSIUM, determination,  
same)



SZCZEPANIAK, Stanislaw

A modified method for the quantitative determination of amino acids with ninhydrin in effluent from the chromatographic column. Ann. Univ. Lublin sect. D 19:303-310 '64.

1. Katedra i Zaklad Chemii Ogolnej, Wydzial Lekarski AM w Lublinie (Kierownik: doc. dr. Irena Krzeczowska).

SZCZEPANIAK, Stanislaw

Determination of the exchange capacity of cationites by means of the flame photometer. Ann. Univ., Lublin sect.D 16:263-273 '61.

1. Z Katedry i Zakladu Chemii Ogolnej Wydzialu Lekarskiego Akademii Medycznej w Lublinie Kierownik: doc. dr Irena Krzeczowska.  
(CATION EXCHANGE RESINS) (PHOTOMETRY)

SZCZEPANIAK, Zenon

Calculation of vaults of wall linings in dog headings. Gornictwo  
Gliwice no.9:109-124 '64.

PODGORSKI, Kazimierz, dr inż.; SZCZEPANIAK, Zenon, mgr inż.

Contribution to the problem of mining thick coal layers in  
protecting pillars of pit shafts. Gornictwo Gliwice no.12:  
63-83 64.

MALINOWSKI, S.; BASINSKI, S.; SZCZEPANSKA, S.; KIEWLICZ, W.

Kinetics of aldolic reactions in gaseous phase on solid catalysts with basic character. Pt. 2. Bul chim PAN 12 no. 3:149-153 '64.

1. Institute of Organic Synthesis, Polish Academy of Sciences, Warsaw, and Department of Organic Technology I, Technical University, Warsaw. Presented by T.Urbanski.

SZCZEPANIAK, Tadeusz, mgr

Employment organization of longshoremen in western European  
seaports. Tech gosp morska 12 no.9:254-261 S '62.

1. Wyzsza Szkola Ekonomiczna, Sopot.

SZCZEPANIAK, Zenon

State of stresses in the corners of junctions of underground galleries. Gornictwo Gliwice no.7:99-118 '63.

SZCZEPANIAK, Tadeusz, dr; KUZMA, Leopold, dr

Concentration of the production potential of the sea ports;  
remarks on the concept of building a new maritime port near  
Koszalin. Tech gosp morska 13 no.1:5-7 Ja '63.

1. Wyzsza Szkola Ekonomiczna, Sopot.



SZCZEPANIAK, Tadeusz, dr

Employment stabilization of longshoremen in seaports of  
capitalistic countries. Tech gosp morska 13 no. 7/8:204-206  
Jl-Ag '63.

1. School of Economics, Sopot.

POLAND

SZCZEPANIAK, Walenty, dr.

Department of General Chemistry, University (Katedra Chemii Ogolnej  
Uniwersytetu im. A. Mickiewicza), Poznan.

Warsaw, Chemia analityczna, No 6, November-December 1965, pp 1199-1203.

"Diphenylcarbazide resin. Part 6: Selective binding of  $Hg^{2+}$  ions  
with the diphenylcarbazone form of the sel-k5 ion exchanger."

S/081/63/000/003/007/036  
B144/B186

AUTHORS: Lewandowski, Anzelm, Szczepaniak, Walenty

TITLE: Selective ion exchangers. II. Ion-exchange resin specific for bismuth

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1963, 132, abstract 3G104 (Chem analit. (Polska), v. 7, no. 3, 1962, 593-597 [Pol.; summary in Eng.] )

TEXT: From m- and p-cresol,  $\text{CH}_2\text{O}$  and nicotine an ion-exchange resin was synthesized which was called  $\text{ScI}$ -K-4. The inorganic cations absorbed by  $\text{ScI}$ -K-4 from acid solutions are washed out easily by 1 N solution of  $\text{HNO}_3$  or  $\text{HCl}$ , or by 2 N  $\text{H}_2\text{SO}_4$ . In the presence of  $\text{KI}$ ,  $\text{Bi}$  occurs in the form of  $\text{BiI}_4^-$  and can be washed out neither by 2 N  $\text{HNO}_3$  solution nor by 4 N  $\text{HCl}$  solution. This peculiarity of  $\text{Bi}$  is used for separating it from mixtures with other cations. A mixture is passed through the column with  $\text{ScI}$ -K-4 (height of layer 30 cm, particle size 0.1 - 0.5 mm) at a rate of 1 ml/min. This mixture contains 2 ml of the test solution with 1 ml 2 N  $\text{KI}$  and  
Card 1/2

Selective ion exchangers. II. Ion-...

S/081/63/000/003/007/036  
B:44/B186

7 ml 1 N  $\text{HNO}_3$  (in the presence of  $\text{Pb}^{2+}$  the volume of the 2 N KI solution added is increased to 8 ml). To remove the other ions, the column is washed with 200 ml 1 N  $\text{HNO}_3$  or HCl, then 25 ml 2 N  $\text{NH}_4\text{OH}$  (to decompose  $\text{Bi}_4^-$ ) and 75 ml water are passed through it, and Bi is washed out with 1 M  $\text{H}_2\text{SO}_4$  solution. This method is used to separate Bi from Pb, Sn, Zn, Mg, and Fe. The experimental error is ~2.5%. For the previous communication, see RZhKhim, 1960, no. 12, 47112. [Abstracter's note: Complete translation.]

Card 2/2

SZCZEPANIAK, Walenty

Diphenylcarbazine resin. Pt. 1. Chem anal 8 no.6:843-848 '63.

1. Department of General Chemistry, Adam Mickiewicz University,  
Poznan.

LEWANDOWSKI, Anzelm; SZCZEPANIAK, Walenty

Ion exchanger specific for titanic ions. Chemia stosow 7  
no.4:603-608 '63.

1. Katedra Chemii Ogolnej, Uniwersytet im. A. Mickiewicza, Poznan.

SZCZEPANIAK, W.*ital*

The Opole Electric Motor Works, Factory "M-6" in Brzeg, an important producer of electric motors of fractional power. Przegl techn no.25:7. Je '62.

SZCZEPANIAK, Witold, mgr., inz.; KAWCZYNSKI, Leszek, inz.

Motor Equipment Plant in Sedziszow Malopolski, Przegl mech  
20 no.19/20:612-613 '61.

1. Zaklady Sprzetu Motoryzacyjnego, Sedziszow Malopolski.



TARCHALSKI, B.; SZCZEPANIAK, W. <sup>Włodzimierz</sup>

Role and importance of coloring of textiles. Przegl włokien 16 no.4:  
196-199 Ap '62.

1. Centralne Laboratorium Przemysłu Bawełnianego, Łódź (for Tarchalski).
2. Zakłady Przemysłu Bawełnianego im. F. Dzierżyńskiego, Łódź (for Szczepaniak).

SZCZEPANIAK, Włodzimierz

Dyeing rayon fabrics by the Pad-~~Steam~~ method. Przegl włokien 16 no.4:  
224-227 Ap '62.

1. Zakłady Przemysłu Bawełnianego im. F. Dzierzynskiego, Łódź.

SZCZEPANIK, M.

"Drawle" (Wood-cutters), by M. Szczepanik. Reported in New Books (Nowe Ksiazki), No. 15, August 1, 1955

SZCZEPANIK, R.

Polish Technical Abst.  
No. 1 1954  
Chemistry and Chemical  
Technology

1953  
Szczepanik R. Isomeric Monomethylnaphthalene

"Izomeryczne monometylnaftaleny". Przemysł Chemiczny. No 4, 1953.  
pp. 211-216.

A brief survey of the progress made in research over the fractionation of high-temperature coal tar, and of the methods of separation used in the coke by-products industry. Review of the more important publications concerning the isolation of 2-methylnaphthalene from coke tar. Results are quoted of the research carried out by the author over separating, from high-temperature tar, the fraction of isomeric monomethylnaphthalenes, as well as over the isolation from this fraction of 2-methylnaphthalene and 1-methylnaphthalene and over the purification of 2-methylnaphthalene separated from it. Emphasis is laid on the essential differences between the results obtained by the methods of isolating monomethylnaphthalenes from coal tar as described in literature and those obtained by the author.

8-30-54  
JP

*LL - M, R.*

Szczepanik R. Isomerio Monomethylnaphthalenes. Part II. Research over the possibilities of using suitable fractions of petrol as the azeotropic factor for naphthalene.

„Izomeryczne monometylonaftaleny. II. Badania nad możliwością zastosowania pewnych frakcji ropy jako czynnika azeotropującego dla naftalenu”. Przemysł Chemiczny. No. 5, 1953, pp. 263—271, 10 figs., 6 tabs.

A short survey is given of investigations on the application, as the azeotropic factor for naphthalene and 2-methylnaphthalene, of suitable fractions of petrol. Description of determination of azeotropic ranges of naphthalene in the presence of homologous series of aliphatic hydrocarbons, the relative isomers and related substances appearing in petrol.

*gk*

2026

SZCZEPANIK, R.

662,738 5:541,722,817,3

Szczepanik R. Isomeric Monomethylnaphthalenes, Part III. Petrol as azeotropic agent of naphthalene and 2-methylnaphthalene.

*„Izomeryczne monometylonaftaleny. III. Nafta jako czynnik azeotropujący dla naftalenu i 2-metylonaftalenu”.* Przemysł Chemiczny, No. 6, 1953, pp. 315—321, 6 figs., 3 tabs.

Description of distillation of petrol as azeotropic agent with a deficient quantity of naphthalene. The material balance of naphthalene is given (as compared with investigations in which the petrol fractions b.p. 200—220°C were used), for quantitative determination of naphthalene content by the azeotropic method. Experiments are described concerning determination of the lower limit of the azeotropic range of 2-methylnaphthalene in the presence of hydrocarbons of some petrol fractions, together with the relative isomers and related substances. An explanation is given of the reasons for deviation in results when determining the real and approximate lower limit of azeotropic ranges of naphthalene and 2-methylnaphthalene in the presence of petrol hydrocarbons as a complex azeotropic agent.

SZCZEPANIK, R.

2827

6987363:511.123.917.3

Szczepanik R. Isomeric Monomethylnaphthalenes. Part IV. Azeotropic method of determining naphthalene in coal tar.

„Izomeryczne monometylnaftaleny. IV. Azeotropowa metoda oznaczania zawartości naftalenu w smołe węglowej”. Przemysł Chemiczny, No. 7, 1953, pp. 375—379, 2 figs., 2 tabs.

A description is given of the process of removing and separating — using a suitable petrol fraction as an azeotropic agent — naphthalene from the fraction of isomeric monomethylnaphthalenes of coal tar oil. Also discussed is the technical application of the method of obtaining the naphthalene-free fraction of isomeric monomethylnaphthalenes, and for determining the content of naphthalene and of the fraction of monomethylnaphthalenes in coal tar.

SZCZEPANIK  
POLSK

Isomeric monomethylnaphthalenes. I. 2-Methylnaphthalene from high-temperature coal tar. R. Szczepanik. *Przemysł Chem.* 9, 211-16 (1933) (English summary). The fractionation of high-temp. coal tar and the isolation of 2-methylnaphthalene (I) are discussed. Since naphthalene and I form an azeotropic mixt. with some petroleum hydrocarbons and since high-temp. coal tar does not distill as an azeotropic but as a polyazeotropic mixt., some petroleum fractions were used as the azeotropic factor in the isolation of the naphthalene fraction from the oils and in the sepn. of naphthalene from the isomeric fraction of I. With this azeotropic method for distg. coal tar, (1) all naphthalene was sepd. from the coal tar; (2) and 1-methylnaphthalene (II) formed azeotropes with the acidic and basic components of the oils and were isolated in neutral oil, which, when distilled, gave 3 fractions, one contg. more than 80% of I and the other more than 80% of II; (3) I could be crystd. directly from neutral oil; (4) impurities contg. S could not be sepd. from I even through several crystals, and (5) the imported I contained a fair amt. of S compds. II. The possibilities of using some petroleum fractions as azeotropic agents for naphthalenes. *Ibid.* 263-71. The petroleum fraction b. 191-243° was isolated on a lab. column. To 403 g. of this fraction 250 g. naphthalene and 100 g. petroleum b. above 260° were added, and the mixt. was distd. on the large lab. column, with the speed of distn. and the degree of deflagration being the same as in the distn. of petroleum alone; the yield was 640.5 g. and the loss 12.6 g. Conclusions: (1) Naphthalene formed pos. azeotropes with this hydrocarbon fraction beginning at 189°, (2) the upper level of the azeotropic range was approx. 230.5°, and (3) naphthalene distilled azeotropically with hydrocarbons above 230.5°. The azeotropic range, as detd. by using the method of ebullimetric addn., was 187-231° or 1.8 degrees greater than that detd. by using the distn. method given above. The method of distn. and the app. are described. III.

CH

3

1/1

AP-204



*R. Szeppank*

Petroleum as an azeotropic factor for naphthalene and 2-methylnaphthalene. *Ibid.* 315-21.—To 489 g. of a petroleum fraction (90% b. 200-20°, 5% 120-200°, and 5% 220-225°) was added 100 g. naphthalene and 100 g. petroleum b. above 250°. The mixt. was distd. on a lab. column. In this distn., called denaphthalization of petroleum, in which a small amt. of naphthalene was used as compared with the amt. of petroleum, the naphthalene increased to a max. at about 214°; above this temp. the amt. of naphthalene decreased rapidly, and at 217.5° petroleum distd. alone. All the naphthalene distd. below its boiling temp. Distn. of 285 g. of a petroleum fraction b. 200-214.5° with 25 g. of pure I  $n_D^{20} = 1.8060$ , showed azeotropy beginning at 218°. IV. Azeotropic method of determining naphthalene in coal tar. *Ibid.* 375-9.—Since the upper level of the azeotropic range of naphthalene coincides with the lower level of I, a petroleum fraction b. below 214° was used to minimize the possibility of azeotropic distn. of I, naphthalene, and higher-boiling fractions of the azeotropic factor. A petroleum fraction b. 197-214° was distd. off, and 12% of naphthalene by wt. was dissolved at 0° and filtered on the Büchner several times until the crystals disappeared; this azeotropic factor contained 7% naphthalene. To obtain a neutral oil, the crude oil was rinsed several times with 16% NaOH, then with 16% H<sub>2</sub>SO<sub>4</sub>, and finally with H<sub>2</sub>O. The H<sub>2</sub>O traces were sepd. from the oil by azeotropic distn. with C<sub>12</sub>H<sub>10</sub>. The oil was then treated with azeotropic factor, distd. to 214°, treated again with the azeotropic factor, and again distd. to 214°. This procedure was repeated until naphthalene ceased to crystallize from the distillate at 0°, the distn. was then carried out above 214°. I and II distd. in the range 239-49°. The content of I, naphthalene, and II were detd. in several oils by azeotropic distn. and found to be higher than those given previously on the basis of older detns. V.

*7/1*

R. Szyzpanik

Determining the approximate content of 2-methylnaphthalene in the fraction of isomeric monomethylnaphthalenes isolated from coal tar. *Ibid.* 478-84. — I and II form a eutectic system with each other. Impurities in the monomethylnaphthalene fraction were sepd. by crystn. of I from neutral oil in MeOH at  $-50^{\circ}$  and  $-70^{\circ}$ , i.e. below the eutectic point of I and II. The residue after crystn. comprised about 9% of foreign matter. Since some of this matter formed eutectic systems with I, the crude fraction probably contained at least 10% impurities, mostly S compounds. I purified by crystn. from MeOH contained 0.2%, while purified by boiling with metallic Na only 0.005% S in the form of methylthionaphthene (III). The increase of the content of III in I did not lower the f.p. of this substance. The percentage of I in the fraction was approx. detd. from the difference between the compn. in percent of the initial oil and the compn. of the obtained crude I. The detn. is sufficient for technological use. VI. Investigation of coal tar as a source of an azeotropic agent for naphthalene separation. *Ibid.* 689-94. — Crude deacidified naphthalene oil (IV) contained acidic components (cresols and xylenols); these components are important azeotropic agents with which naphthalene distills below its b.p. The compn. of IV varied with the kind of coal used, the method of distn. of the coal tar, and temp.; however, the variations in IV are not so great as to cause a variation in its distn. Crude IV, rich in naphthalene, was distd. in a 25-plate lab. column at 10 ml./10-12 min.; the degree of deflagration was 10:1. Four phases were distinguished: (1) acidic oils (60%, max. at  $180-4^{\circ}$ ), small amts. of neutral and basic oils, and naph-

3/4

over

R. L. Lycop. et al.

thylene at 174-200°; (2) naphthalene (15-60%) contg. also acid components (20-35%) and neutral and basic oils (15-25%), with which naphthalene distills azeotropically below the boiling temp. of pure naphthalene at 294-22° (max. of naphthalene at 215-18°); above 216° the amt. of naphthalene decreases with increasing amt. of neutral oil and the appearance of I and II; (3) intermediate fraction at 222-37° with naphthalene as the main component at the beginning and I toward the end of this fraction; (4) the fraction of I distg. mostly at 236-41.7° together with II. Distn. of the same oil deacidified with 15% NaOH showed that (1) naphthalene appeared at 206-7.5°; (2) the max. amt. of naphthalene appeared at the boiling temp. of pure naphthalene; (3) only 1/3 of the total amt. of the naphthalene in oil distd. up to 218°; (4) there was no borderline between the naphthalene and the I fraction. VII. Investigation of separation of crude fraction of isomeric monomethylnaphthalenes on the technical apparatus. *Ibid.* 10, 46-65 (1964). —The mother liquor from the naphthalene fraction and IV, both rich in the monomethylnaphthalenes, were used in this distn.; 250 tons of oil were distd. with the yield of about 25 tons of a crude fraction of isomeric monomethylnaphthalenes. The app. consisted of a 40,000-l. distn. kettle, a distn. column with a diam. of 220 cm. with 40 plates, and a deflagration head. The modified Engler app. was used to control the boiling temp. The method of control of distn. and distn. itself, which proceeded similarly to that on lab. scale, are fully described. The speed of distn. was 700-800 l./hr.

Gene A. Wozny

SZCZEPANIK

POLAND/Chemical Technology. Chemical Products and Their I-13  
Application--Treatment of solid mineral fuels

Abs Jour: Ref Zhur-Khimiya, No 3, 1958, 9224

Author : Szczepanik, R.

Inst : Not given

Title : Isomeric Monomethyl Naphthalenes. II. Investigation of the Possibility of the Utilization of Some Naphtha Fractions in the Preparation of Azeotropic Mixtures with Naphthalene. III. Investigation of Azeotropic Mixtures of Naphthalene and 2-methylnaphthalene with the Naphthenic Fractions. IV. An Azeotropic Method for Determining the Naphthalene Content in Coal Tar. V. An Approximate for Determining the Content of 2-methylnaphthalene in the Fraction of Isomeric Monomethylnaphthalenes Separated from Coal Tar. VI. Investigation of the Possibility of the Azeotropic Separation of Naphthalene from Coal Tar.

Orig Pub: Przem. chem., 1953, Vol 9, No 5, 263-271; No 6, 315-321; No 7, 375-379; No 9, 478-484; No 11, 589-

Card 1/2

Abstract: For Part I see RZhKhim, 1954, 20745. No abstract.

SZCZEPANIK, R.

POL

3331

Szczepanik R. Isomeric Monomethylnaphthalenes. 7. Research over Isolating Raw Fraction of Isomeric Monomethylnaphthalenes in a Technical Apparatus.

„Izomeryczne monometylonaftaleny. Cz. 7. Badania nad wydzieleniem surowej frakcji izomerycznych monometylonaftalenów na aparaturze technicznej”. Przemysł Chemiczny, No. 1, 1954, Bul. Plac. Nauk.-Bad. MPChem., pp. 46-55, 6 figs., 1 tab.

An investigation was made into the possibility of isolating the isomeric monomethylnaphthalenes fraction from high temperature coal tar in a technical distillation apparatus utilizing, as azeotropic agent to facilitate separation of naphthalene, mother liquor from the naphthalene fraction. It was established that the distillation gives directly the fraction in which the main component of crystallization is 2-methylnaphthalene.

SZCZEPANIK, R.; SWIETOSLAWSKI, W.; GRUBERSKI, T.

From the investigation of acenaphthene fraction. p. 163. (PRZEMYSŁ CHEMICZNY, Vol. 10, No. 3, Mr. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol.3, No. 12, Dec. 1954, Uncl.

method for studying the course of distillation of the coal tar oils is described. The method consists in measuring the temperatures of disappearance of crystals of the complex collected during the distillation and the rate of disappearance after recrystallization from methyl alcohol. The term "main crystallization" is suggested for that component which

5

Szczepanik, R.

POLAND / Chemical Technology; Chemical Products and Their Appli- H-22  
cation, Part 3. - Treatment of Solid Combustible  
Minerals.

Abs Jour : RZhKhim. No 14, 1958, No 47991

Author : R. Szczopenik.

Inst : -

Title : Fundamental Trends of Treatment of High Temperature Coal Tar.

Orig Pub : Przem. chem., 1955, 11, No. 10, 547 - 549.

Abstract : Basic information concerning the treatment of coal tar is  
presented, the economical importance of this question and  
the necessity of an additional refining of the coke-chem-  
ical industry products are emphasized. Bibliography with  
nine titles.

Card 1/1



SZCZEPANIK, R.

Basic rules of processing high-temperature coal tar. p. 547.  
przemysl chemiczny. Warszawa. Vol. 11, no. 10, Oct, 1956

Source: East European Accessions List, (EEAL), Lc, Vol. 5, no. 2, Feb. 1956

POLAND / Chemical Technology, Chemical Products and H  
Their Application, Part 3. - Treatment of  
Solid Combustible Minerals.

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 62169.

Author : R. Szczepanik.

Inst : Not given.

Title : Fundamental Problems of Treatment of High-Tem-  
perature Coal Tar in Poland. Part II.

Orig Pub: Przem. chem., 1956, 12, No 7, 358 - 363.

Abstract: Data concerning the production of coal tar of  
various kinds in Poland according to mean yields  
of all the possible products of high-temperature  
coal tar distillation at coal-tar chemical works,  
as well as the development of the coal tar treat-  
ment are presented. It was concluded in general

Card 1/2

69

SZCZEPANIK, R.

POLAND/Chemical Technology - Chemical Products and Their Application. Chemical Processing of Solid Fossil Fuels. H.

Abs Jour : Ref Zhur - Khimiya, No 10, 1959, 36311

Author : Szczepanik, R.

Inst :

Title : The Application of Heavy Oil for Azeotropic Separation of High-Boiling Fractions of Coal Tar.

Orig Pub : Chem. stosow., 1958, 2, No 1, 51-108.

Abstract : The application of the postnaphthalene fractions of coal tar (CT) (the boiling range, 199-254°) in the capacity of an azeotropic means for the separation of naphthalene (H) from the high-boiling CT fractions was investigated. The feasibility of obtaining an additional quantity of H, a greater division of heavy fractions, as well as an yield of absorption oil, was demonstrated. The content of acids and bases was determined in the narrow CT fractions, and

Card 1/2

Development of the purification process of 2-methylnaphthalene with the omission of solvent. Tadeusz Sowa and Ryszard Szczepanik. Chem. Siozwana 2, 381-84 (1958). The principles have been indicated for choice of purification methods and detn. of the degree of purity of 2-methylnaphthalene (I). Results of research are presented on detn. of contaminants in I obtained by the Polish method from the fraction of isomeric monomethylnaphthalenes by direct crystn. with the omission of solvent, as well as in imported I. M. Markiewicz

3  
3 May  
4E 32  
4E 2C '93

29

SZCZEPANIK, Ryszard; CZARNOTA, Irena

The influence of the main component of crystallization on the solubility of naphthalene in the oils from the hightemperature coal tar. Chemia stosow 4 no.1:53-80 '60. (EEAI 9:10)

1. Instytut Chemii Fizycznej w Warszawie  
(Naphthalene) (Tar oils) (Coal tar)

SZCZEPANIK, R.

Studies on the influence of temperature and infra-red rays and ultra-violet rays upon the aging process of road tars. Koks 6 no.5:182  
0 '61.

(Tar)

SZARZEPANIK, Ryszard

Binary and multicomponent liquid - solid systems formed by aromatic hydrocarbons, anthraquinone and fractions of coke tar. Chemia stosow 7 no.4:621-660 '63.

1. Katedra Chemii i Technologii Materialow Budowlanych,  
Politechnika, Warszawa.

SZCZEPANIK, Roman

Crystalline characteristics and light and their influence  
on the aging of prepared road tars. Koks 8 no.5:177-184  
S-O '63.

1. Szkola Glowna Planowania i Statystyki, Katedra Towaroznawstwa,  
Warszawa.



SZCZEPANIK, Ryszard

Contribution and calculated influence of coke tar components on the properties of crude tars prepared as adhesive plastic materials. Chemia stosow A 8 no.3:321-343 '64.

1. Department of Chemistry and Technology of Building Materials of the Warsaw Technical University.

SECRETARIAT, S.

Electrical Engineering 494. Utilization of insulating oils in power equip- 621.315.615  
Abst. ment. S. S. ZEPANIK AND M. GUZIA. *Energetyka*,  
Section B 7, No. 4, 188-93 (1953) In Polish.  
March 1954 A review of types of oils and properties required  
Insulating Materials. for their application in transformers, circuit breakers,  
Insulators. condensers and cables. Deterioration in service due  
to combined action of moisture and fibrous impurities  
discussed and current methods for ageing resistance  
testing are compared. J. TORASZEWICZ

SECH-PAK, S.

1454. SEPARATION OF NAPHTHALENES IN COAL TAR DISTILLATION  
6000-1454. S. Chem. (Chem. Ind.), 1955, 11, 1321. 509: Abstr. in  
Indust. Chem.

SZCZEPANIK, Z.

SZCZEPANIK, Z. Aparat wylgowy "Ink II." Warszawa, Panstwowe Wydawn.  
Rolnicze i Lesne, 1952. 119 p. (The Ink II brooder)  
DA Not in DLC

AGRICULTURE  
Poland

So: East European Accession, Vol. 6, No. 5, May 1957

S/137/62/000/010/002/028  
A052/A101

AUTHORS: Olszak, Feliks, Kozielski, Jozef, Bialowas, Wiesław, Makowski,  
Henryk, Szczepanik, Zenobiusz

TITLE: A method of increasing nickel concentration in an iron-nickel  
alloy

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 10, 1962, 23,  
abstract 10G162P (Polish pat, no. 44838, July 20, 1961)

TEXT: The method consists in conversion of Fe-Ni alloy accompanied by a  
partial slagging of Fe as a result of which the Ni concentration in the alloy  
increases. Air or oxygen blast is used. The converter lining should be preferably  
a basic one. In the process of conversion acid fluxes are added to bind Fe oxides  
being found.

Yā. Dozorets

[Abstracter's note: Complete translation]

Card 1/1

SZCZEPANIK-DZIKOWSKI, Zbigniew

5  
S/137/62/000/011/002/045  
A052/A101

AUTHORS: Bęczkowski, Włodzimierz, Deminet, Henryk, Długosz, Józef, Garba-  
ciuk, Tadeusz, Gaska, Bohdan, Gaska, Zdzisław, Izbiński, Wacław,  
Łuczak, Szymon, Maciejewicz, Roman, Morawski, Romuald, Szczepanik-  
Dzikowski, Zbigniew

TITLE: Continuous furnace for shield annealing

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 10, abstract  
11B56P (Pol. pat., no. 44895, September 21, 1961)

TEXT: A continuous vertical type inverted U-shaped furnace for shield  
annealing consists of corresponding heating through compartments with electrical  
heating. A chain conveyor with suspenders (or baskets) for annealed pieces pas-  
ses through the furnace, whereby in the lower part of the furnace the conveyor  
passes through gates with attachments filled with a liquid (e.g. water). When  
the workpieces are charged the conveyor with suspenders sinks into the liquid  
and emerges already in the heating compartments. In its surface part the liquid  
is in a state near to boiling and the vapor produces the necessary shield in the

Card 1/2

Continuous furnace for shield annealing

5  
S/137/62/000/011/002/045  
A052/A101

furnace. To stir the shielding atmosphere and to equalize the temperature, ventilators are installed in the middle of two branches of the furnace.

S. Glebov

[Abstracter's note: Complete translation]

Card 2/2

SZCZEPANKIEWICZ, E.; ZAMORSKI, J. (Wroclaw)

On close-to-convex and close-to-starlike functions. Roczn. prace matem  
6:141-148 '61.

1. Instytut Matematyczny Polskiej Akademii Nauk. Uniwersytet  
Wroclawski.



SZCZEPANKIEWICZ, R.

"Airplanes on the Horizon; A Story." (To be Contd.) P. 602, "From The Notebook of an Instructor in Airplane Modeling. 4." (To be Contd.) P. 604. (SKRZYDLATA POLSKA, Vol. 10, No. 38, Sept. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955 Uncl.

SZCZEPANKIEWICZ, R.

"Airplanes on the Horizon; A Story. 2." (To Be Contd.) P. 622, (SKRZYDLATA  
POLSKA, Vol. 10, No. 39, Sept. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (HEAL), LC, Vol. 4,  
No. 1, Jan. 1955 Uncl.

SZCZEPANKIEWICZ, R.

"Airplanes on the Horizon; A Story. 3." (To be Contd.) P. 638. (SKRZYDLATA POLSKA, Vol. 10, No. 40, Oct. 1954, Warszawa, Poland.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955 Uncl.

SZCZEPANKIEWICZ, R.

"Airplanes on the Horizon; a Story." (Conclusion) P. 654. (SKRZYDLATA POLSKA, Vol. 10, No. 41, Oct. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955 Uncl.

SZCZEPANIKIEWICZ, STANISLAW.

Intensywnosc urzeźbienia krajobrazu okolic Walbrzycha. Acta  
geographica Universitatis Wratislaviensis. Wrocław, Nake. Wrocław-  
skiego Tow. Naukowego, 1948. 23p. (Wrocławskie Towarzystwo Naukowe.  
Prace. Seria B, nr. 8) / Intensity of topographic relief in the  
Walbrzych section. illus., bibl./

NN

SOURCE: East European List (EEAL) Library of Congress,  
Vol. 6, No. 1 January 1957

SECZEPANKIEWICZ, S.

"Development of the Valley of the Upper Bobrowa River at the edge of a Glacier in the Sudetes." P. 122,

(CZASOPISMO GEOGRAFICNE, Vol. 23/24, 1952/53, Wroclaw, Poland.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3,  
No. 12, Dec. 1954, Uncl.

SZCZEPANKOWSKI, E.

A conference of the rationalizers of the machinery industry in Poznan. p. 60.

RACJONALIZATOR. (Centralny Związek Spolzielczosci Pracy) Warszawa,  
Vol. 6, no. 3, Mar. 1959.

Monthly List of East European Accessions (EEAI) LC. Vol. 8, no. 7, July 1959.

Uncl.

SZCZEPANOWSKA, A.

SZCZEPANOWSKA, A. RW Monocerotis. Acta astronomica, 1951, v. 4,  
p. 137-148.



SZCZEPANOWSKA, A.

~~Public~~ observations of VW Cephei. Acta astronom 9 no.1:38-45  
159.

1. Krakow Observatory, Krakow.

SZCZEPANOWSKA, A.

Minima of eclipsing variables observed in the years 1956-1958.  
Acta astronom 9 no.1:46-47 '59.

1. Krakow, Observatory, Krakow.

SZCZEPANOWSKA, A.

Photoelectric minima of two eclipsing binaries AK Herculis  
and UV Leonis. Acta astronom 12 no.3:200-205 '62.

1. Observatory, Krakow.

SZCZEPANOWSKA, A.

Geocentric ephemeris of the oppositions of the libration  
points  $L_4$  and  $L_5$  in the earth-moon system for 1964.  
Acta astronom 13 no.3:206-211 '63.

1. Observatory, Krakow.